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30827 7590 02/18/2010 MCKENNA LONG & ALDRIDGE LLP 1900 K STREET, NW WASHINGTON, DC 20006				
EXAMINER				
GOLIGHTLY, ERIC WAYNE				
ART UNIT		PAPER NUMBER		
1792				
MAIL DATE		DELIVERY MODE		
02/18/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/516,604

**Applicant(s)**

PARK, SEOK KYU

**Examiner**

Eric Golightly

**Art Unit**

1792

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 October 2009.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5, 7-35 and 41 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-5, 7-35 and 41 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/GS/US)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. Applicant's amendment filed 10/9/2009 is acknowledged. Claims 1-5, 7-35 and 41 are pending. Claims 6 and 36-40 are cancelled. Claim 41 is new.

#### ***Claim Objections***

2. Claims 1-5 and 10 are objected to because of the following informalities:

Regarding claims 1-5, the word "tube" in line 9 of each of claims 1-5 should be replaced with "tub".

Regarding claim 10, the comma in line 2 should be deleted.

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-5, 7-35 and 41 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1-5 include the new limitation that the step of soaking by holding the tub and pulsator stationary is performed *after* the step of removing by rotating the tub or pulsator *is completed* (lines 8 and 9 of each of claims 1-5), which lacks support in the specification as filed.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-5, 7-35 and 41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1-5, the phrases "removing contaminants stuck to a surface of the tub", "soaking the contaminants ... after removing contaminants .. is completed" and "separating soaked contaminants from the surface of the tub" in lines 6-10 of each of claims 1-5 renders the claims indefinite since it unclear whether or not the soaked contaminants *separated* from the surface (the last phrase) are the same contaminants which are removed from the surface (the first phrase). It appears that the intended meaning may be that they are not the same contaminants, and this meaning will be used for purposes of examination.

Regarding claims 3-5 and 41, the phrase "supplying clean water to the tub a second time" in line 14 of each of claims 3-5 renders the claims indefinite because it is not exactly clear what this is referring to. Each of claims 3-5 teaches recites "supplying water to a tub" in line 3 and "supplying water to the surface of the tub" in line 12. It

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appears that both of these supplying steps are intended to be performed with water that is clean, but they are not recited as "clean water". Further, it is not clear which of the earlier recited supplying steps, if any, is intended to be considered the "first time" with respect to the phrase "supplying clean water to the tub a *second* time". Accordingly, the phrase "supplying the clean water to tub for the second time" in lines 1 and 2 of claim 41, which depends from any one of claims 3-5, renders the claim indefinite.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-5, 8, 9, 11-18, 20-30, 32, 35 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 3,770,376 to Sharpe (hereinafter "Sharpe").

Sharpe teaches a method for sanitizing a clothes washer (abstract) and discloses the steps of: supplying water to a tub (col. 4, lines 31-36 and col. 5, lines 46-52); rotating the tub (col. 2, lines 52-57 and col. 5, line 43 and 49-52); energizing the main motor after the water supply is completed (col. 5, lines 34-39), or soaking contaminants for a predetermined time period by holding the tub and agitator stationary; and draining water from the tub (col. 5, line 65 to col. 6, line 6).

Regarding claims 1-5, Sharpe is silent regarding: no laundry is to be introduced into the tub, permeating water into the contaminants, the use of a pulsator, removing

contaminants stuck to a surface of the tub by rotating a tub or a pulsator in the tub, separating soaked contaminants from the surface of the tub by holding the tub and pulsator stationary, that supplying water and rotating the tub are performed at the same time, and that the step of soaking by holding the tub and pulsator stationary is performed after removing contaminants by rotating the tub or pulsator. It would have been obvious to one of ordinary skill in the art at the time of the invention to supply water without laundry in order to prevent cross-contamination from the tub to the laundry or vice versa, as per the Sharpe teaching. Regarding supplying water and rotating the tub being performed at the same time, and soaking by holding the tub and pulsator stationary after removing contaminants by rotating the tub or pulsator, the selection of the order of performing steps is prima facie obvious in the absence of new or unexpected results. MPEP 2144.04(IV)(C). It is noted that Sharpe discloses that recirculating water to and from the tub, which reads on supplying water to the tub, during washing operations advantageously permits filtration of the water (col. 2, lines 9-15 and 66-89 and col. 3, lines 1-7), which at least suggests also recirculating, or supplying, during tub sanitation in order to filter the water. It is noted that the use of predetermined times is known in the art and the skilled artisan would have found it obvious to use a predetermined time between rotation of a tub or pulsator and draining, or soaking contaminants for a predetermined time by holding the tub and pulsator stationary after removing contaminants by rotating the tub or pulsator, in order to ease the process for the operator. The skilled artisan would have found it obvious that the method as per the Sharpe cleaning could be performed with a reasonable expectation

of success to clean a washing machine comprising a pulsator, wherein the tube and pulsator are held stationary and are rotated, as with the tub and agitator of the Sharpe teaching. As to permeating water into the contaminants, removing contaminants stuck to the surface of the tub and separating soaked contaminants from the surface of the tub, these limitations are inherent in the Sharpe method because the water supplied to the tub will permeate, and rotating a tub or pulsator will remove and separate contaminants.

Further regarding claims 2-5 and 11, Sharpe does not explicitly teach supplying water to the surface of the tub during draining thereby preventing resticking of the contaminants to the surface of the tub. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to supply water during draining in the method as per the Sharpe teaching, including during a later half of the draining step, because this is a conventional technique for enhancing the cleaning process (see, for example, the abstract and Fig. 9 of US 5,167,722 to Pastryk, et al. which teaches a spray rinse process for an automatic washer including a rinsing process during the draining step).

Further regarding claims 3-5, Sharpe discloses spraying water to the tub, or supplying water to the tub for a second time and rinsing the surface of the tub (col. 5, lines 46-52) and draining water from the tub for a second time (col. 6, lines 37 and 38), but is silent regarding supplying clean water to the tub after the draining of the water the first time is completed. The skilled artisan would have found it obvious to supply clean

water to the tub after draining water from the tub the first time with a reasonable expectation of success in order to enhance the cleaning.

Further regarding claims 4 and 5, Sharpe does not explicitly teach supplying water to the surface of the tub during the step of draining water from the tub for a second time thereby preventing resticking of contaminants to the surface of the tub. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to repeat the step of supplying water to the surface of the tub during the step of draining water from the tub for a second time in the method as per the Sharpe teaching in order enhance the cleaning process. Supplying water a second time will prevent sticking of contaminants to the tub surface.

Regarding claims 5 and 14, it would have been obvious to one of ordinary skill in the art at the time of the invention to use high speed rotation in the method as per the Sharpe teaching to remove water from the surface of the tub because high speed rotation is a conventional technique for water removal (see, for example, US 2,588,774 to Smith at col. 8, lines 5-8, which teaches a washing machine wherein clothes are spun at high speed to remove rinse water).

Regarding claims 8, Sharpe discloses rotating a basket, or tub (col. 4, lines 28-30), which will form a water circulation. It is noted that water will be permeating contaminants while rotating the tub per Sharpe.

Regarding claims 9, 32 and 35, Sharpe discloses rotating a basket, or tub, at low speed (col. 4, lines 25-30) but does not explicitly teach rotating the tub at high speed.



However, it would have been obvious to one of ordinary skill in the art at the time of the invention to use high speed rotation in the method as per the Sharpe teaching in order to provide a greater driving force for permeation.

Regarding claim 12, Sharpe does not explicitly teach rotating the tub while water is supplied to the tub during the step of supplying water to the tub surface. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to rotate the tub while thus supplying water to the tub surface in the method as per the Sharpe teaching for enhancing the comprehensive tub surface area coverage and removal of water.

Regarding claim 13, Sharpe discloses spraying water to the surface of the tub (col. 5, lines 46-52).

Regarding claim 15, Sharpe discloses introducing chlorine bleach, or a halide group bleaching agent, into a dispensing cup (Fig. 1, ref. 150 and col. 4, lines 11-18) which is in the tub (Fig. 1, ref. 28 and col. 2, line 20) before supplying the water. However, the skilled artisan would have found it obvious that introducing the bleaching agent into the tub could be performed during supplying water to the tub such that that bleaching agent and water are supplied to the tub together with a reasonable expectation of success in view of, inter alia, the Sharpe disclosure of bleach to water concentration ratios (col. 4, lines 61 to col. 5, line 2) and gradually dispensing the bleach into the water (col. 5, lines 37-39)

Regarding claims 16 and 17, Sharpe does not explicitly teach using an oxygen group bleaching agent. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to use an oxygen bleaching agent because oxygen group agents are conventionally known bleaching agents (see, for example, US 4,618,444 to Hudson, et al. at col. 2, lines 24-32, which teaches a laundry detergent with a peroxygen bleaching agent).

Regarding claim 18, Sharpe discloses introducing a disinfectant (col. 4, lines 11-16) but does not explicitly teach introducing a fungicidal agent. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a fungicidal agent in the method as per Sharpe because these agents are conventionally used to enhance cleaning (see, for example, US 6,530,384 to Meyers, et al. at col. 5, lines 42-44), which teaches a cleaning solution comprising a fungicide).

Regarding claim 20, Sharpe discloses displaying a "sanitize" cycle (Fig. 2, see bold arrow below, and col. 4, lines 11-14), or tub cleaning course, which is under progress on a display of the washing machine during tub cleaning.

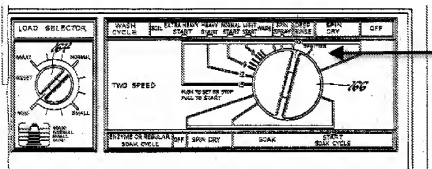


Fig. 2

Regarding claims 21-26, Sharpe does not explicitly teach displaying an accumulated number of washing courses performed by the washing machine after the tub cleaning on a display of the washing machine. However, It would have been obvious to one of ordinary skill in the art at the time of the invention to display the washing courses as claimed in the method as per the Sharpe teaching because it is conventional to display the accumulated number of processes completed since a reset (see, for example, US 2002/0128729 to Blair, et al. at [0037] which teaches a laundry machine control system wherein the total number of times a cycle has been activated since the counts were last cleared is displayed).

Regarding claims 22-25, Sharpe does not explicitly teach displaying a target number of washing courses to be performed by the washing machine before the next tub cleaning on a display of the washing machine. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to display the target number when using the method as per the Sharpe teaching in order to enhance an operator's ability to ensure that the cleanings occur in a timely manner.

Regarding claim 23 specifically, Sharpe does not explicitly teach that the target number can be changed. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a changeable target number with the method as per the Sharpe teaching in order to fine tune the cleaning process.

Regarding claim 24 specifically, Sharpe discloses a tub cleaning step wherein a user manually selects a tub cleaning course (col. 4, lines 11-18) but does not explicitly teach selection of a tub cleaning course when the accumulated number of washing

courses reaches the target number. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to select of the tub cleaning course upon reaching the target number in the method as per the Sharpe teaching in order to ensure the cleanliness of the tub.

Regarding claim 25 specifically, Sharpe does not explicitly teach automatic performance of the tub cleaning steps when the accumulated number of washing courses reaches the target number. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to automate the method as per the Sharpe teaching in this manner in order to inhibit the likelihood that the cleaning will be neglected due to operator error.

Regarding claim 26 specifically, Sharpe discloses a step wherein a user manually selects a tub cleaning course (col. 4, lines 11-18) but does not explicitly teach setting a mode where a user manually selects a tub cleaning course when the accumulated washing courses performed by the washing machine displayed reaches a target number of washing courses to be performed before the next tub cleaning. However, It would have been obvious to one of ordinary skill in the art at the time of the invention to use such a manual mode with the method as per the Sharpe teaching in order to allow for operator override in case of an automation problem.

Regarding claim 27, Sharpe does not explicitly teach setting a time to automatically perform a tub cleaning at the washing machine. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to automate

the method of the Sharpe teaching in this manner in order to inhibit the likelihood that the cleaning will be neglected due to an operator's forgetfulness.

Regarding claim 28, Sharpe does not explicitly teach setting a mode where tub cleaning automatically progresses. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to automate the method as per the Sharpe teaching in this manner in order to free up an operator who would otherwise be needed to manually perform the cleaning. See MPEP 2144.04(III).

Regarding claim 29, Sharpe discloses spinning, or rotating, a tub (col. 6, lines 6-11), which forms a water circulation. It is noted that contaminants will be separating while rotating the tub per Sharpe.

Regarding claim 30, Sharpe does not explicitly teach rotating the tub at high speed. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to use high speed rotation in the method as per the Sharpe teaching in order to provide increased agitation for cleaning. It is noted that contaminants will be separating and water will be circulating in a radial direction in the tub while rotating at high speed in the method as per the Sharpe teaching.

Regarding claim 41, Sharpe is silent regarding the water being completely drained from the tub before supplying the clean water to the tub for the second time. The skilled artisan would have found it obvious to completely drain the water from the tub before supplying clean water to the tub for the second time in order to enhance the complete removal of contaminants through the drain.

9. Claims 7, 10, 31, 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharpe (US 3,770,376) in view of KR 20010093969 to Kim (hereinafter "Kim").

Sharpe discloses rotating an agitator (col. 4, lines 25-30) but does not explicitly teach that the agitator used is a pulsator, permeating by rotating a pulsator provided in the tub for forming a water circulation, or rotating the tub at high speed. However, Kim teaches a washing machine tub cleaning method wherein a water current is made to rise along the tub wall due to a rotating pulsator, which reads on a pulsator forming water circulation. It would have been obvious to one of ordinary skill in the art at the time of the invention to include the use of the rotating pulsator as per the Kim teaching in the method as per the Sharpe teaching because affecting a water current in this manner increases agitation, enhancing the cleaning process. Moreover, the skilled artisan would have found it obvious to use high speed rotation in the method as per the Sharpe/Kim teachings in order to provide a greater driving force for permeation and agitation for separation.

10. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sharpe (US 3,770,376) in view of JP 2002346288 to Iwai, et al. (hereinafter "Iwai").

Sharpe does not explicitly teach the use of a sterilizing agent which is a halogenated hydantoin compound that emits hypohalogenated acid. However, Iwai teaches a method of using a washing machine including a housing unit for use with a

sterilizing agent which includes a hydantoin halide compound for releasing a hypohalogenic acid by water contact, which reads on the halogenated hydantoin compound. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the hydantoin compound of the Iwai teaching with the method as per the Sharpe teaching in order to inhibit bacteria growth and sanitation problems.

### ***Response to Amendment***

11. The objection of claim 3 raised in the previous Office action is withdrawn in view of the amendment. New claim objections are raised herein, as discussed in the section "Claim Objections".

### ***Response to Arguments***

12. Applicant's arguments filed 10/9/2009 have been fully considered but they are not persuasive.

Regarding applicant's argument that that the applied art does not teach or suggest removing contaminants stuck to a surface of the tub by rotating a tub or a pulsator in the tub (remarks at page 12, first full paragraph), applicant is invited to read the previous Office action, paragraph bridging pages 3 and 4). In short, Sharpe (US 3,770,376) does not explicitly teach the use of a pulsator and removing contaminants stuck to a surface of the tub by rotating a tub or a pulsator in the tub. The skilled artisan would have found it obvious that the method as per the Sharpe cleaning could be performed with a reasonable expectation of success to clean a washing machine

comprising a pulsator, wherein the tub and pulsator are held stationary and are rotated, as with the tub and agitator of the Sharpe teaching. As to removing contaminants stuck to the surface of the tub and separating soaked contaminants from the surface of the tub, this limitations is inherent in the Sharpe method because the water supplied to the tub will permeate, and rotating a tub or pulsator will remove contaminants.

Applicant's other arguments concern the present amendments. Regarding applicant's argument that that the applied art does not teach or suggest:: removing contaminants stuck to a surface of the tub by rotating a tub or a pulsator in the tub; and soaking the contaminants for a predetermined time period by holding the tub and the pulsator stationary after removing contaminants by the tub or pulsator is complete (remarks at page 11, paragraph beginning "Independent claims 1-5" and page 12, first full paragraph), Sharpe discloses; supplying water to a tub (col. 4, lines 31-36 and col. 5, lines 46-52); and rotating the tub (col. 2, lines 52-57 and col. 5, line 43 and 49-52). Sharpe is silent regarding: the use of a pulsator, removing contaminants stuck to a surface of the tub by rotating a tub or a pulsator in the tub, separating soaked contaminants from the surface of the tub by holding the tub and pulsator stationary, and that the step of soaking by holding the tub and pulsator stationary is performed after removing contaminants by rotating the tub or pulsator. It is noted that the use of predetermined times is known in the art and the skilled artisan would have found it obvious to use a predetermined time between rotation of a tub or pulsator and draining, or soaking contaminants for a predetermined time by holding the tub and pulsator stationary after removing contaminants by rotating the tub or pulsator, in order to ease



the process for the operator. The skilled artisan would have found it obvious that the method as per the Sharpe cleaning could be performed with a reasonable expectation of success to clean a washing machine comprising a pulsator, wherein the tube and pulsator are held stationary and are rotated, as with the tub and agitator of the Sharpe teaching. As to removing contaminants stuck to the surface of the tub and separating soaked contaminants from the surface of the tub, these limitations are inherent in the Sharpe method because rotating a tub or pulsator will remove and separate contaminants.

Regarding applicant's argument that the applied art does not teach or suggest; supplying clean water to a tub a second time after draining water from the tub a first time and supplying water to the surface of the tub are completed (remarks at page 11, paragraph beginning "Independent claims 1-5", page 12, last paragraph and page 13, first paragraph), Sharpe discloses spraying water to the tub, or supplying water to the tub for a second time and rinsing the surface of the tub (col. 5, lines 46-52) and draining water from the tub for a second time (col. 6, lines 37 and 38), but is silent regarding supplying clean water to the tub after the draining of the water the first time is completed. The skilled artisan would have found it obvious to supply clean water to the tub after draining water from the tub the first time with a reasonable expectation of success in order to enhance the cleaning.

***Conclusion***

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Golightly whose telephone number is (571) 270-3715. The examiner can normally be reached on Monday to Thursday, 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Kornakov can be reached on (571) 272-1303. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EWG

/Michael Kornakov/  
Supervisory Patent Examiner, Art Unit 1792